

2. Contributions to a proposed Monograph of the Homopteous Family Cicadidæ.—Part I. By W. L. DISTANT.

[Received April 16, 1883.]

(Plate XXV.)

I have for some years studied this interesting family of insects and collected materials for a monograph of the same; but finding that the difficulties are more considerable than I anticipated, and that such a work will still require much greater time to produce, I propose from time to time to offer contributions towards a knowledge of the Cicadidæ, hoping ultimately to publish a more or less complete monograph of the whole family. The Society has already (P. Z. S. 1882, p. 125) done me the honour of printing the results of my examination of the species contained in the Godeffroy Museum at Hamburg; and the present paper is chiefly devoted to the collection in the Dresden Museum, including the species collected in Celebes by Dr. A. B. Meyer, which are of considerable interest, producing a somewhat remarkable new genus. I have added the descriptions of a few species contained in my own and in the very rich collection of Dr. Signoret of Paris, at the bulk of which I am still working, and hope to give the result very shortly. By the examination of these foreign collections, and more especially by a comparison of the same with Walker's numerous types of his indifferently described species in the British Museum, much necessary and preparatory work will be effected.

ZAMMARA LUCULENTA, n. sp. (Plate XXV. figs. 4, 4a, 4b.)

♂. Head ochraceous; the front greenish with the centre fuscous; the vertex with the anterior margin and area of the ocelli fuscous. Pronotum ochraceous, the posterior and lateral margins greenish, with a fuscous T-shaped central spot near the anterior margin, and a small central pale ochraceous spot near the posterior margin. Mesonotum greenish, with two obconical central spots on anterior margin, which are ochraceous and broadly and transversely marked with fuscous, followed by a W-shaped fuscous fascia which is situate immediately before the cruciform elevation, which is more or less ochraceous. Abdomen above reddish ochraceous, the disk and lateral margins longitudinally suffused with fuscous. Under-side of head and thorax, legs and opercula greenish; abdomen beneath reddish ochraceous, with the posterior margin of the penultimate segment fuscous. Tarsi ochraceous, the claws fuscous. Rostrum greenish ochraceous, the tip pitchy and reaching the base of abdomen. Tegmina and wings pale hyaline, their bases narrowly reddish ochraceous, and the venation with the basal half greenish, the remainder ochraceous. The face is long, moderately convex, distinctly transversely striated, but without a longitudinal sulcation; the opercula are small and obliquely rounded, the tympanal orifices

very large and uncovered; and the head (including outer margins of eyes) is about equal in width to the base of the mesonotum.

Long. 24 millim.; exp. tegm. 85 millim.

*Hab.* (unknown). (Mus. Dresden.)

The unspotted tegmina, apart from the structural peculiarities, render this species very distinct.

*TETTIGARCTA CRINITA*, n. sp. (Plate XXV. figs. 5, 5a, 5b, 5c.)

♂. Body above reddish ochraceous. Head with the front clothed with very long fuscous hairs, and with a thick and long tuft of the same at base of vertex (which is slightly convex), stretching across the ocelli; eyes dull obscure grey mottled with brownish. Pronotum wrinkled and rugulose, the lateral angles broadly truncate and slightly concave, the lateral margins rounded, reflexed and somewhat amplified; a moderately raised subovate space at anterior margin which is hairy, on each side of which are two connected rounded spots with fuscous margins, the outer of which are most distinct. Cruciform elevation at base of mesonotum elongate, its base petiolate. Abdomen with the posterior segmental margins fuscous and hairy. Body beneath and legs ochraceous, thickly clothed with greyish hair; apices of tibiæ, apices of tarsal joints, and claws castaneous. Rostrum reaching posterior coxæ and with its apical half pale fuscous. Face conically compressed and covered with long fuscous hairs. Tegmina subargentaceous or pale talc-like, the venation, costal membrane, and basal and claval areas ochraceous; a small fuscous spot beneath and near the end of costal membrane, and a few small fuscous markings near base. Wings subargentaceous or pale talc-like, the venation ochraceous, and the base narrowly pale fuscous.

Long. 32 millim.; exp. tegm. 80 millim.

*Hab.* Australia, *sic.* (Mus. Dresden.)

This species differs from *T. tomentosa*, the only other described species of the genus, in the non-pointed and truncate lateral angles of the pronotum, the paler tegmina, and absence of the fuscous macular markings on their apical halves, &c.

The extent of this genus and its exact habitat are still interesting questions. It is now nearly forty years since Adam White described the genus from specimens of a single species collected during Eyre's expedition of discovery in Central Australia; and the only habitat given was "Australia." Now a second species is found in the Dresden Museum, but also with the same loosely worded habitat.

*DUNDUBIA RAFFLESII*, n. sp.

♂. Head and body above ochraceous, moderately and palely pilose. Eyes pale brown mottled with fuscous, ocelli bright castaneous; posterior and lateral margins of pronotum greenish ochraceous; mesonotum with two central pale and subobsolete obconical spots situate at anterior margin, with an obscure pale fuscous oblique streak on each side. Body beneath and legs

ochraceous; opercula reaching the third abdominal segment, slender, concavely constricted on each side near base, and then again convexly widened to apex, which is rounded; rostrum about reaching posterior coxæ, with its apex narrowly fuscous. Tegmina and wings pale hyaline; veins and costal membrane of tegmina ochraceous.

Long. 30 millim.; exp. tegm. 73 millim.

*Hab.* Java. (Ccll. Dist.)

This species is allied to *D. rufivena*, Walk., from which it differs in its larger and more robust body and much more slender opercula, which in *D. rafflesii* are not perceptibly broader at the apex than at the base, which is quite the reverse of what obtains in *D. rufivena*.

COSMOPSALTRIA MEYERI, n. sp. (Plate XXV. figs. 2, 2a, 2b.)

Body above castaneous. Head with the vertex and front nearly completely suffused with blackish; ocelli and eyes yellowish. Pronotum with a central black longitudinal fascia, the posterior and lateral margins obscure ochraceous. Mesonotum with two large contiguous black obconical spots on anterior margin, a large, lateral, subconical black fascia on each side, and a triangular black fascia in front of cruciform elevation, the apex of which is produced between the central obconical spots, and which also possesses posteriorly a central and angulated base. Abdomen very dark castaneous. Body beneath and legs dark castaneous; sternum and base of abdomen thickly and palely pilose; opercula ochraceous, extending to about base of fourth abdominal segment, concavely constricted beyond base, and then slightly and convexly rounded to apex, apical portion distinctly narrower than base (rostrum mutilated). Tegmina and wings pale hyaline; the first slightly infuscated, with the costal membrane, basal area, and veins brownish or fuscous, transverse veins at bases of second and third apical areas infuscated, and two small submarginal fuscous spots at apices of veins enclosing first and second apical areas; wings with anterior claval margin and a basal streak pale fuscous.

The face is very convexly tumid, with a shallow central discal sulcation, transverse striations becoming more profound from base to apex; the anterior femora are armed with two strong spines, one near base and one near apex; between the last and apex is a small and somewhat rudimentary spine.

Long. 50 millim.; exp. tegm. 132 millim.

*Hab.* Celebes (*A. B. Meyer*). (Mus. Dresden.)

This species is allied to *C. spinosa*, Fabr., from which it differs in its different markings both of body and tegmina, the longer and differently shaped opercula, &c.

PERISSONEURA, n. gen.

♀. Head triangular, the front prominently and subacutely produced; the vertex with the lateral margins slightly convex behind the eyes and prominently produced in front of the eyes. Pronotum at posterior angles about twice as broad as anterior margin, the posterior angles amplified, deflexed to base of tegmina, and broadly

rounded at apices. Abdomen above distinctly and longitudinally raised and carinate. Face very prominent, strongly compressed and wedge-shaped, concavely narrowing on its apical half. Rostrum reaching the intermediate coxæ. Tegmina elongate; the costa very slightly depressed immediately beyond base, and then slightly raised and convex from about the apex of upper ulnar area; the interior ulnar area with the apex slightly but distinctly broader than base; the space between the apices of the postcostal vein and the postcostal ulnar ramus amplified, and the costal margin very finely hirsute; apical areas eight, the eighth broadest and shortest; an additional curved and rudimentary vein connecting the base of the second and the apex of the fifth ulnar areas, this vein is distinct and perfect for a short distance from the base of the second and into the third ulnar areas, after which it is subobsolete; basal area almost twice as long as broad.

My knowledge of this most interesting genus is confined to a female specimen collected by Dr. A. B. Meyer in Celebes.

*PERISSONEURA MACULOSA*, n. sp. (Plate XXV. figs. 3, 3a, 3b.)

♀. Pale ochraceous or greenish; ocelli castaneous; mesonotum with two central obconical dark spots, the bases of which rest on anterior margin; on each side of these is a much longer and more acutely pointed spot, and a small round spot in front of each anterior branch of the cruciform basal elevation, which is marked by two central darker lines; abdomen above sparingly pilose, the apical segmental margins paler. Body beneath and legs pale ochraceous or greenish; femora near apices, tibiæ near bases and at apices, and apices of tarsi fuscous. Rostrum with the apex pitchy. Tegmina and wings pale hyaline, the first minutely spotted along all the veins and more or less across its apical half.

Long. ♀, 18 millim.; exp. tegm. 56 millim.

*Hab.* Celebes (*Dr. Meyer*). (Mus. Dresden.)

*TIBICEN?* *LIFUANA*, Montr.

*Cicada lifuana*, Montr. Ann. Soc. Ent. de Fr. sér. 4, i. p. 70. 3 (1861).

♂. Head and pronotum pale ochraceous, the last with two central longitudinal pale brownish lines, the posterior margin greenish with its inner border and the lateral margins pale brownish. Mesonotum pale brownish, the lateral margins and cruciform elevation ochraceous. Abdomen warm ochraceous, the disk brownish and the base of the last segment broadly blackish. Body beneath and legs ochraceous. Tegmina and wings pale hyaline. Tegmina with the costal membrane and basal half of venation greenish, remaining venation and claval area brownish. Wings with the venation brownish, the claval area more or less suffused with the same colour.

Rostrum reaching posterior coxæ, its apex dark fuscous. The face is moderately broad, the central sulcation deep, and the transverse striations distinct. Anterior femora armed with three strong spines, the one near apex smallest. Posterior femora with a few

long slender spines on each side. Opercula small and oblique, not passing the base of abdomen.

Long. 21 millim. ; exp. tegm. 62 millim.

*Hab.* New Caledonia (*Layard*). (Coll. Dist.)

Other specimens from the same locality in the collection of Dr. Signoret, which I have since examined, are somewhat darker in hue, especially the anterior legs, which are brownish.

Montrouzier's description is so slight that I certainly should have failed to identify his species had I not received specimens so labelled from Dr. Signoret. I have therefore given a full description of this insect, which I have placed provisionally in the genus *Tibicen*. From this, however, it somewhat differs in the ulnar veins at base, which, though distinctly separated, are yet contiguous, thus approaching the genus *Melampsalta*.

MELAMPSALTA OLDFIELDI, n. sp.

♀. Head, pronotum, and mesonotum greenish ; abdomen greenish ochraceous, a central longitudinal castaneous fascia extending from base of head to apex of abdomen. Head with four large black spots on vertex, two at area of ocelli, and two in front of eyes ; mesonotum with pale ochraceous margins to the central castaneous fascia ; central base of abdominal margins blackish. Body beneath pale greenish ochraceous ; face castaneous with its whole central disk black. Tegmina and wings pale hyaline ; tegmina with the costal membrane and basal venation greenish, remaining venation pale fuscous ; claval area and that between the postcostal vein and the postcostal ulnar ramus warm ochraceous.

Wings with the base ochraceous, the claval area more or less suffused with the same colour, the veins greenish, becoming fuscous towards outer margin.

The anal sheaths enclosing ovipositor are fuscous, and project considerably beyond the apex of the abdomen ; the ovipositor is dark castaneous, the last abdominal segment being triangularly excavated at its emergence ; the rostrum just passes the intermediate coxæ, and has its apex castaneous ; the face is laterally compressed and concave on each side, the central sulcation being very deep.

Long. 21 millim. ; exp. tegm. 55 millim.

*Hab.* New Holland, *sic.* (Coll. Signoret.)

The broad central castaneous fascia on the upperside of the body of this species renders it very distinct from the other numerous Australian species of the genus.

CARINETA CROCEA, n. sp. (Plate XXV. figs. 1, 1a, 1b.)

♂. Body and legs dull ochraceous and sparingly pilose. Head above strongly hirsute, with the area of the ocelli infuscated. Pronotum with a short basal longitudinal castaneous spot. Mesonotum with two obconical black-margined spots at anterior margin, on basal sides of which are two small black marginal spots, a castaneous transverse spot in front of the cruciform elevation, on each side of which is a subquadrate black spot. Beneath, the abdomen is rather

darker in hue; the rostrum has its apex pitchy, which about reaches the posterior coxæ; and the anterior femora are armed beneath with three strong spines. Tegmina and wings pale hyaline, the venation of the first pale ochraceous, of the last more or less fuscous; first apical area of the tegmina about one third longer than the second.

Long. 19 millim.; exp. tegm. 60 millim.

*Hab.* Colombia. (Mus. Dresden.)

*CARINETA CINGENDA*, n. sp.

♂. Head and thorax above greenish ochraceous. Head with a lateral black margin to front, and vertex with the area of the ocelli marked with black; eyes fuscous. Pronotum with two looped oblique black lines on disk directed towards the eyes, followed beneath by two black toothed and curved lines, and with a narrow basal submarginal blackish fascia. Mesonotum with two short central obconical spots at anterior margin distinctly margined with black; on each side of these is a longer, somewhat similarly shaped and fainter spot; two small fuscous spots in front of the basal cruciform elevation, on each side of which is a laterally curved fascia completely covered with long ochraceous pilosity. Abdomen above warm ochraceous, the segmental incisures regularly and narrowly margined with very dark fuscous. Body beneath and legs sparingly pilose; anterior femora armed beneath with three prominent and robust dark-coloured spines, one near base and two near apex; rostrum just passing intermediate coxæ, its apex black; claws fuscous. Tegmina and wings pale hyaline; the first with the costal membrane ochraceous; the venation of both more or less fuscous.

The head, including the outer margin of eyes, is about equal in width to the base of the mesonotum; the opercula are small, imperfectly covering the orifices; the first apical area of the tegmina is about one third longer than the second.

Long. ♂, 18–19 millim.; exp. tegm. 52 millim.

*Hab.* Madeira river, Amazons. (Coll. Dist.)

This is a distinctly marked species, the black lines to the abdomen above being very characteristic.

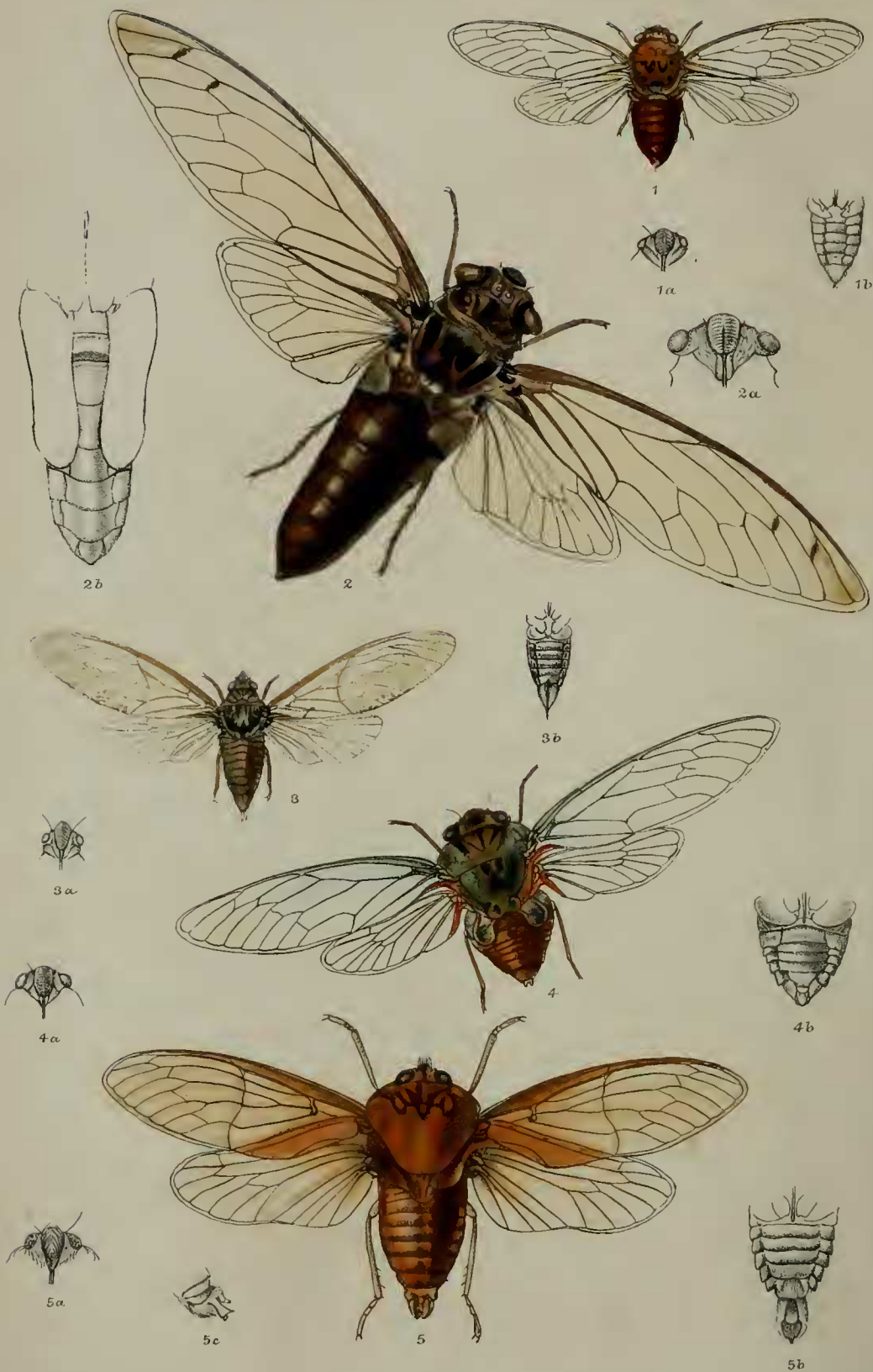
*CARINETA APICALIS*, n. sp.

♀. Head and thorax above greenish, tinged with ochraceous; ocelli shining ochraceous, their are adull ochraceous; eyes pale or dark fuscous; mesonotum faintly marked at anterior margin with two obconical spots, the margins alone of which are ochraceous, its basal cruciform elevation pale ochraceous. Abdomen above dull ochraceous. Body beneath and legs ochraceous; face, and margins of sternum greenish; disk of abdomen castaneous. Tegmina and wings pale hyaline; the veins variable in hue—greenish, ochraceous, and fuscous. Tegmina with the first apical area one third longer than the second. Anterior femora armed beneath with three strong spines. Rostrum reaching the intermediate coxæ.

Var. A. Abdomen beneath with the lateral margins greenish.

Long. 18–19 millim.; exp. tegm. 48–54 millim.





Horae Knight, del et lith.

West, Newman & Co. imp.

Exotic Cicadidæ.